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## *SOIL PROCESSES AFFECTING THE PRESENCE OF OXYFLUORFEN IN SURFACE AND GROUNDWATERS OF SOUTH SPAIN*

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*The presence of herbicides used in olive orchards at Guadalquivir river basim is a severe problem and hence, the study of the soil processes affecting those herbicides is important to design strategy to minimize that adverse effect. The objective of this work was to assess the soil processes affecting the herbicide oxyfluorfen (2-chloro-4-trifluoromethylphenyl-3-ethoxy-4-nitrophenyl ether) and the effect of olive oil mill waste (OMW) amendment in two soils (P2 and SJ) of South. The relationships of relevant oxyfluorfen soil processes ant its concentrations measured in surface and ground water is attempted. Sorption-desorption studies showed higher oxyfluorfen sorption upon amendment, presumably due to the higher OM. DT50 values for SJ (29d) and P2 (19d) increased with moisture, whereas OMW amendment with increased much longer. Leaching potential of oxyfluorfen was very low, decreased with temperature and increased upon amendment. This mobility is related to soil porosity distribution and their changes with amendment enhancing the vertical movement. Dissolved organic matter(DOM) it could have also a role. The low deep mobility at 4ºC, as compared to 25ºC, it could be related with the maximum oxyfluorfen concentration in surface water measured at December (4-12ºC), whereas those of ground water were measured at April-May (17-25ºC).*